



SITOP PSU300S/3AC/24VDC/40A

SITOP PSU300S 40 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/40 A *Ex approval no longer available*

| Input | |
|--|---|
| type of the power supply network | 3-phase AC |
| supply voltage at AC | |
| • minimum rated value | 400 V |
| • maximum rated value | 500 V |
| • initial value | 340 V |
| • full-scale value | 550 V |
| design of input wide range input | Yes |
| operating condition of the mains buffering | at $V_{in} = 400\text{ V}$ |
| buffering time for rated value of the output current in the event of power failure minimum | 6 ms |
| operating condition of the mains buffering | at $V_{in} = 400\text{ V}$ |
| line frequency | |
| • 1 rated value | 50 Hz |
| • 2 rated value | 60 Hz |
| line frequency | 47 ... 63 Hz |
| input current | |
| • at rated input voltage 400 V | 2 A |
| • at rated input voltage 500 V | 1.7 A |
| current limitation of inrush current at 25 °C maximum | 60 A |
| I ² t value maximum | 3.4 A ² ·s |
| fuse protection type | none |
| • in the feeder | Required: 3-pole connected miniature circuit breaker 10 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) |
| Output | |
| voltage curve at output | Controlled, isolated DC voltage |
| output voltage at DC rated value | 24 V |
| output voltage | |
| • at output 1 at DC rated value | 24 V |
| relative overall tolerance of the voltage | 3 % |
| relative control precision of the output voltage | |
| • on slow fluctuation of input voltage | 1 % |
| • on slow fluctuation of ohm loading | 2 % |
| residual ripple | |
| • maximum | 150 mV |
| voltage peak | |
| • maximum | 240 mV |
| adjustable output voltage | 24 ... 28 V |
| product function output voltage adjustable | Yes |
| type of output voltage setting | via potentiometer; max. 960 W |

| | |
|--|--|
| display version for normal operation | Green LED for 24 V OK |
| type of signal at output | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK" |
| behavior of the output voltage when switching on | No overshoot of Vout (soft start) |
| response delay maximum | 1.5 s |
| voltage increase time of the output voltage <ul style="list-style-type: none"> • typical • maximum | 15 ms 500 ms |
| output current <ul style="list-style-type: none"> • rated value • rated range | 40 A 0 ... 40 A; 48 A up to +45°C; +60 ... +70 °C: Derating 3%/K |
| supplied active power typical | 960 W |
| short-term overload current <ul style="list-style-type: none"> • on short-circuiting during the start-up typical • at short-circuit during operation typical | 65 A 65 A |
| duration of overloading capability for excess current <ul style="list-style-type: none"> • on short-circuiting during the start-up • at short-circuit during operation | 100 ms 100 ms |
| product feature <ul style="list-style-type: none"> • bridging of equipment | Yes |
| number of parallel-switched equipment resources for increasing the power | 2 |
| Efficiency | |
| efficiency in percent | 91.5 % |
| power loss [W] <ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical | 89 W |
| Closed-loop control | |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 3 % |
| relative control precision of the output voltage load step of resistive load 50/100/50 % typical | 1.5 % |
| setting time <ul style="list-style-type: none"> • load step 50 to 100% typical • load step 100 to 50% typical | 1 ms 1 ms |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical | 3 % |
| setting time <ul style="list-style-type: none"> • load step 10 to 90% typical • load step 90 to 10% typical • maximum | 1 ms 1 ms 10 ms |
| Protection and monitoring | |
| design of the overvoltage protection <ul style="list-style-type: none"> • typical | protection against overvoltage in case of internal fault Vout < 35 V 50 A |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection | Electronic shutdown, automatic restart |
| enduring short circuit current RMS value <ul style="list-style-type: none"> • maximum | 14 A |
| overcurrent overload capability in normal operation | overload capability 150 % Iout rated up to 5 s/min |
| Safety | |
| galvanic isolation between input and output | Yes |
| galvanic isolation | Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16 |
| operating resource protection class | Class I |
| protection class IP | IP20 |
| Approvals | |
| certificate of suitability <ul style="list-style-type: none"> • CE marking • UL approval • CSA approval • NEC Class 2 • EAC approval | Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) No Yes |

| | |
|---|---|
| type of certification | |
| <ul style="list-style-type: none"> • BIS • CB-certificate | Yes; R-41183539 Yes |
| certificate of suitability | |
| <ul style="list-style-type: none"> • IECEx • ATEX • ULhazloc approval • cCSAus, Class 1, Division 2 • FM registration | No No No No No |
| certificate of suitability shipbuilding approval | Yes |
| Marine classification association | |
| <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Lloyds Register of Shipping (LRS) | Yes No No |
| EMC | |
| standard | |
| <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity | EN 55022 Class B EN 61000-3-2 EN 61000-6-2 |
| environmental conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation • during transport • during storage | -25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C |
| environmental category according to IEC 60721 | Climate class 3K3, 5 ... 95% no condensation |
| Mechanics | |
| type of electrical connection | screw-type terminals |
| <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts | L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm ² single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 10 mm ² 13, 14 (alarm signal): 1 screw terminal each for 0.05 ... 2.5 mm ² |
| width of the enclosure | 145 mm |
| height of the enclosure | 145 mm |
| depth of the enclosure | 150 mm |
| required spacing | |
| <ul style="list-style-type: none"> • top • bottom • left • right | 40 mm 40 mm 0 mm 0 mm |
| net weight | 3.1 kg |
| product feature of the enclosure housing can be lined up | Yes |
| fastening method | Snaps onto DIN rail EN 60715 35x15 |
| electrical accessories | Redundancy module, buffer module, selectivity module, DC UPS |
| mechanical accessories | Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20 |
| MTBF at 40 °C | 500 000 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

